WHAT IS CLAIMED IS:

1.   An image processing method, comprising the steps of:

separating image data into luminosity data and chromaticity data; and

changing a rate of smoothing of the chromaticity data and a rate of smoothing of the luminosity data according to a variation of the luminosity data in two-dimensional coordinate space.

2.   The image processing method as defined in claim 1, wherein:

a first reference value is specified as to a degree of the variation of the luminosity data; and

in image areas where the variation of the luminosity data is smaller than the first reference value, the chromaticity data is subjected to the smoothing first and, if necessary, the luminosity data is subjected to the smoothing thereafter.

3.   The image processing method as defined in claim 1, wherein:

a first reference value is specified as to a degree of the variation of the luminosity data; and

in image areas where the variation of the luminosity

data is smaller than the first reference value, the rate of the smoothing of the chromaticity data is made greater than the rate of the smoothing of the luminosity data.

4.   The image processing method as defined in claim 2, wherein:

a second reference value is specified as to a degree of the variation of the luminosity data so that the second reference value is smaller than the first reference value; and

in image areas where the variation of the luminosity data is larger than the second reference value, the luminosity data is not subjected to the smoothing.

5.   The image processing method as defined in claim 3, wherein:

a second reference value is specified as to a degree of the variation of the luminosity data so that the second reference value is smaller than the first reference value; and

in image areas where the variation of the luminosity data is larger than the second reference value, the luminosity data is not subjected to the smoothing.

6.   The image processing method as defined in claim 2,

wherein

in image areas where the variation of the luminosity data is larger than the first reference value, the luminosity data is not subjected to the smoothing and the chromaticity data is not subjected to the smoothing.

7.   The image processing method as defined in claim 3, wherein

in image areas where the variation of the luminosity data is larger than the first reference value, the luminosity data is not subjected to the smoothing and the chromaticity data is not subjected to the smoothing.

8.   The image processing method as defined in claim 1, wherein

the rate of the smoothing of the chromaticity data and the rate of the smoothing of the luminosity data are changed according to a distribution parameter of the luminosity data.

9.   An image processing device, comprising:

a data separator section for separating image data into luminosity data and chromaticity data;

a chromaticity noise removing section for smoothing the chromaticity data;

a luminosity noise removing section for smoothing the luminosity data; and

a smoothing rate computing section for computing a variation of the luminosity data in two-dimensional coordinate space and computing, for each unit area of an image, a rate of the smoothing of the chromaticity data and a rate of the smoothing of the luminosity data according to the variation as outputs to the chromaticity noise removing section and the luminosity noise removing section respectively.

10. The image processing device as defined in claim 9, wherein

the smoothing rate computing section compares the variation of the luminosity data with a first reference value specified as to a degree of the variation of the luminosity data, and in image areas where the variation of the luminosity data is smaller than the first reference value, computes the rates given by such equations that the rate of the smoothing of the chromaticity data becomes larger than the rate of the smoothing of the luminosity data.

11. The image processing device as defined in claim 10, wherein

the smoothing rate computing section compares the variation of the luminosity data with a second reference value specified as to a degree of the variation of the luminosity data so that the second reference value is smaller than the first reference value, and in image areas where the variation of the luminosity data is larger than the second reference value, computes the rates given by such equations that the luminosity data is not subjected to the smoothing.

12.   The image processing device as defined in claim 10, wherein

in image areas where the variation of the luminosity data is larger than the first reference value, the smoothing rate computing section computes the rates given by such equations that the luminosity data is not subjected to the smoothing and the chromaticity data is not subjected to the smoothing.

13.   The image processing device as defined in claim 10, wherein

the smoothing rate computing section includes a reference specification section for assigning variable values to the reference values depending on an external input.

14. A computer-executable image processing program, performing a process of:

separating image data into luminosity data and chromaticity data; and

changing a rate of smoothing of the chromaticity data and a rate of smoothing of the luminosity data according to a variation of the luminosity data in two-dimensional coordinate space.

15. The image processing program as defined in claim 14, wherein:

a first reference value is specified as to a degree of the variation of the luminosity data; and

in image areas where the variation of the luminosity data is smaller than the first reference value, the chromaticity data is subjected to the smoothing first and, if necessary, the luminosity data is subjected to the smoothing thereafter.

16. The image processing program as defined in claim 14, wherein:

a first reference value is specified as to a degree of the variation of the luminosity data; and

in image areas where the variation of the luminosity data is smaller than the first reference value, the rate

of the smoothing of the chromaticity data is made greater than the rate of the smoothing of the luminosity data.

17.   The image processing program as defined in claim 15, wherein:

a second reference value is specified as to a degree of the variation of the luminosity data so that the second reference value is smaller than the first reference value; and

in image areas where the variation of the luminosity data is larger than the second reference value, the luminosity data is not subjected to the smoothing.

18.   The image processing program as defined in claim 16, wherein:

a second reference value is specified as to a degree of the variation of the luminosity data so that the second reference value is smaller than the first reference value; and

in image areas where the variation of the luminosity data is larger than the second reference value, the luminosity data is not subjected to the smoothing.

19.   The image processing program as defined in claim 15, wherein

in image areas where the variation of the luminosity data is larger than the first reference value, the luminosity data is not subjected to the smoothing and the chromaticity data is not subjected to the smoothing.

20. The image processing program as defined in claim 16, wherein

in image areas where the variation of the luminosity data is larger than the first reference value, the luminosity data is not subjected to the smoothing and the chromaticity data is not subjected to the smoothing.

21. The image processing program as defined in claim 14, wherein

the rate of the smoothing of the chromaticity data and the rate of the smoothing of the luminosity data are changed according to a distribution parameter of the luminosity data.

22. A computer-readable recording medium, for recording an image processing program performing a process of:

separating image data into luminosity data and chromaticity data; and

changing a rate of smoothing of the chromaticity data and a rate of smoothing of the luminosity data

according to a variation of the luminosity data in two-dimensional coordinate space.